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ABSTRACT

This document examines the relationship between the principle of representative government and information in light of dramatic changes in technology. The information age has increased the volume of information and the velocity of its transmission, while linking citizens directly to the site of decisions and facilitating direct citizen participation in political decision-making. Potential negative effects include the fact that the high costs of arranging and supporting teledemocracy systems may be so substantial that those who bear the costs will want to establish the agendas, and studies indicate that technology does not reduce apathy. New technologies have resulted in an over abundance of information, which often leads citizens to make decisions based on image rather than substance. Implications for social studies education include understanding: (1) information processing techniques; (2) information selectivity; and (3) participation attitudes and skills. Social studies educators should collaborate with software designers to develop system interfaces that enhance user search efficiency and provide education that stresses knowledge, information processing, skills, and first-hand experiences. There must be commitment to the vitality of representative government and the belief that citizens can be informed and participate responsibly. (JHP)

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A paper presented at the Annual Meeting
of the
National Council for the Social Studies
Dallas, TX, November 15, 1987

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INFORMATION TECHNOLOGY AND REPRESENTATIVE GOVERNMENT: EDUCATING AN INFORMED AND PARTICIPATIVE CITIZENRY[1]

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> I know no safe depository of the ultimate powers of society but the people themselves; and if we think them not enlightened enough to exercise their control with wholesome discretion, the remedy is not to take it from them, but to inform their discretion. (Thomas Jefferson, in a letter to William Charles Jarvis, 28 September 1820)

Few statements speak so eloquently of the need for an informed citizenry in a democracy. Jefferson joined Jean Jacques Rousseau and John Stuart Mill in advocating a classical theory of democracy, the most distinctive feature of which is the concept of an active, informed, democratic citizenry. Jefferson's lifelong commitment to public education is a clear reflection of this view of the citizen's role in a democracy.

It is fully appropriate, then, to seriously examine the relationship between the principle of representative government and information in light of dramatic changes in technology. This paper approaches the subject by first considering the vitality of

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the "informed citizen" concept since Jefferson's day, and how information technology carries both positive and negative consequences for the development of an informed and involved citizenry. In light of these consequences, the author advances some ideas relevant to social studies education for enhancing representative government in the Information Age.

Representative Government and the "Informed Citizen"

Until World War II, the democratic requirement of an informed, participating citizenry was an article of faith among political scientists; indeed, it is still the dominant view of citizenship in school textbooks. Walker (1966a) characterized this theory as:

> the familiar doctrine of popular rule, patterned after the New England town meeting, which asserts that public policy should result from extensive, informed discussion and debate. By extending general participation in decision making the classical theorists hoped to increase the citizen's awareness of his moral and social responsibilities, reduce the danger of tyranny, and improve the quality of government. (p. 285)

Discourse among political theorists (Schumpeter, 1943) and the results of public opinion survey research of the late 1940s and early 1950s precipitated a rethinking of classical democratic theory. The research demonstrated that few citizens were active participants in the political process; low voter turnout was one indicator of this. Moreover, the "informed citizen" was the exception rather than the rule.

An elitist theory of democracy provided better explanations for the continued successful operation of our constitutional democracy inspite of the research results. This theory posited a political system divided into two groups: the elite and the remaining mass of citizens. In reality, the success of democracy rests on the elite being informed and participating, while the citizens at large simply choose among competing elites within a broad political consensus. A number of additional doctrines associated with elitist theory contrast sharply with classical theory (Walker, 1966b):

1. the belief that the political activity of the average citizen is more or less a permanent aspect of his behavior, not an artifact of the social and political system;
2. the related belief that political inactivity is a sign of satisfaction with the operation of the political system, form of passive consent;
3. the belief that political apathy is not seriously dysfunctional in a democratic system and, on the part of some writers, the belief that widespread apathy may be a prerequisite for the successful functioning of the system;
4. the belief that agreement on democratic norms among political leaders is more important than consensus among the common citizens for achieving political stability; and
5. an overriding concern with maintaining the stability of political systems. (p. 391)

Elitist theory of democracy acknowledged what was obvious: for most citizens, the "costs" of becoming informed about the issues of the day and of participating in the political process are higher than the perceived benefits. It takes time to find and understand the information needed to make a reasoned,

rational decision. It also takes time and effort to make one's decision known in an effective manner. Presumably, the elite is willing (and has sufficient resources) to invest such time and effort. Indeed, the elite, according to Nie, Verba and Petrocik, is "a group well informed and more politically thoughtful than is the average citizen" (1979, p. 135). Political scientists began to turn their attention away from the mass citizenry and to study political elites, to examine elite behavior rather than citizen decision making.

The post-War revision of democratic theory, the abandonment of classical theory in favor of elitist theory, would be most disturbing to Mr. Jefferson, and is very disturbing to those who espouse participatory theories of democracy (e.g., Pateman, 1970). The dawn of the Information Age may have opened a new round in the battle between these competing theories of democracy. Two questions require investigation: (1) what has been (or may be) the effect of information technology on the development of informed and participative citizens, and (2) what implications for social studies education can we draw from these effects?

Positive and Negative Effects of Information Technology

The Positive Effects: The Classical View Revitalized

The Information Age has increased both the volume of information and the velocity of information transmission. According to Information Today, the number of on-line databases grows at more than 35 percent annually, making astonishing

amounts of information available to citizens. As of April 1984, more than 2,000 databases were available for business and individuals ("Total Databases Top 2000"). Information services like The Source and CompuServe allow individuals to link to an impressive collection of databases as well as to participate with fellow citizens in dozens of forums. Cable television and its four-score and more channels offer citizen viewers a broad range of information avenues. Westin (1987) observed that these technological developments have paralleled legislative initiatives that have expanded the citizen's right to know, citing the Federal Privacy Act of 1974 and the 1974 amendments to the 1966 Freedom of Information Act as two examples. Beyond information access alone, experiments like Columbus, Ohio's QUBE system have demonstrated that information technology can link citizens directly to the site of decisions and can even facilitate direct citizen participation in political decision making.

Indulging in some fantasy for a moment, consider the possibilities for a renaissance of classical democratic theory. When the spread of new and emerging information technologies reaches far and wide and becomes as commonplace as the telephone or the car, there would be a universe of opportunities for citizens to participate directly in political decision making. Citizens would have access to a veritable ocean of information on which to base their decisions, and they would vote directly on legislation. As the technology overcomes obstacles of distance and time, the nation would be reduced electronically to the size of a

city-state like that of ancient Athens. Even if this fanciful ideal were never fully realized on a national scale, it certainly would be feasible at the level of local politics (Hollander, 1987). At the very least, the diffusion of information technology could increase the quality and quantity of political participation by the citizenry.

The Negative Effects: Infoglut and Paralysis

Westin (1987) noted that while the potential for access to public information is high, the nation has not chosen to expend public funds on shopping mall or storefront computer terminals for citizens to investigate infractions of federal regulatory rules. But information access is only one side of the coin; processing is the other. When one looks beyond information technology to the people who use information, one is quickly roused from the fantasy described above by a number of sobering realities.

Investigating the effectiveness of teledemocracy experiments similar to QUBE, Arterton (1987) found little to rejoice about. True, the 13 projects he reviewed did seem to improve citizen access to decision makers, and did seem to broaden citizen participation in decision making somewhat. On the other hand, two unpleasant problems remained. First, the cost of arranging and supporting teledemocracy systems is so substantial that those who bear the costs (an elite) tend to want to have a substantial say in setting the agenda. Second, technology did not seem to reduce apathy. Based on his research, Arterton judged that two-

thirds of citizens simply will not participate, regardless of the technology. Citizens lack sufficient interest to make plebiscites feasible as a way of making policy.

Perhaps the amount of information puts citizens off. Daniel Bell (1973) estimated that the amount of information coursing through society will double every two years. Others suggest that scientific and technical information will double every 12 months. Given the increasingly complex nature of political decisions, many of which require considerable scientific and technical sophistication, this latter point is particularly unsettling. The individual citizen may well be challenged beyond his or her limits by this situation.

Worse still, even elites may be paralyzed by an overwhelming deluge of complex data. Elitist theory assumes that rational decision making, while not operative at the level of individual citizens, is still possible at the level of elites. Rational decision making remains a question of gauging the probability of outcomes and choosing action alternatives most likely to achieve desired ends (or, in the language of economics, to maximize expected utility). Such elite-level choices are presumably made in an information-rich environment where problems are well understood and the alternatives are clear. What information technology has created, however, is an <u>information-glutted</u> environment. Elites now must grapple with complexities and volumes of information that have stymied the individual citizen for decades.

In short, information technology has brought us "infoglut". The result: few citizens participate, and those who do make decisions based more on image than on substance. Elites rely increasingly on calculation through the number-crunching analyses of bureaucracies and less on judgment. Moreover, some warn that we are in danger of witnessing the erosion of a shared political and cultural reality, given the increasing ability to selectively filter out the information we receive through the cable channels, satellite beams, and information services we choose. Political elites may be no less susceptible to this effect than the average citizen. Thus does information technology challenge the vitality of representative government as provided for in the Constitution.

Implications for Social Studies Education

Looking Beyond the Technology

As suggested in examining the negative effects of information technology, one must look beyond the technology to the users of information to understand how the technology might be harnessed for the enhancement of representative government. A fixation with the technology causes us to forget a number of key points, all of which must be considered in order for the negative consequences of information technology to be remedied.

Information processing. Information has little use until it is processed by the citizen decision maker. The acquisition and

processing of information exacts a cognitive "cost" and if the citizen is unwilling to pay the cost, the amount of information and the speed with which it can be obtained are irrelevant.

Contextual knowledge. The ability to obtain large amounts of information rapidly is also irrelevant if citizens lack sufficient contextual knowledge to guide their search. Research conducted by the Educational Technology Center of the Harvard Graduate School of Education suggests that effective use of databases, for example, requires background knowledge related to the database content (Lockheed, Gulovsen, and Morrison, 1985). In the context of democratic citizenship, this might include background knowledge relevant to contemporary political issues as well as more general knowledge about the political system in which citizen decisions are registered and their consequences felt.

Information selectivity. Effective use of information requires selectivity. On the one hand, this selectivity might be dysfunctional for effective democratic citizenship, as suggested earlier, if it resulted in a decay of national political consensus. On the other hand, selectivity can serve to enhance political and cultural cohesion. Which result occurs depends on the criteria one uses for information selection.

Participation attitudes and skills. Little information will be sought and processed without some motivation for doing so; that is, without an expectation of meaningful participation. Technology can foster participation to some extent, if increased

access to public officials enhances the citizen's expectation that access will translate into influence. But, of course, this is not necessarily the case. Non-technological means must be sought to increase the citizen's sense of political efficacy, by addressing both the attitudes and the skills involved in political participation.

In considering how social studies education can meet the challenges of information technology, our field must address the issues of information processing, contextual knowledge, information selectivity, and participation attitudes and skills. Each is reflected in the recommendations that follow.

Enhance the Ability to Process Information

Information utility interfaces. A considerable amount of effort is currently being expended in the design of human/-computer interfaces for information systems. One fundamental design criterion is user-friendliness. User-friendliness in the context of information systems frequently refers to easing the user's burden of technical expertise. The technical details of a system should be transparent to the user, allowing him or her to interact with the information in the most natural way possible. Moreover, information interfaces should allow users to seek and retrieve information in much the same way they would outside the system with more traditional information technologies, affording the maximum flexibility for divergent search and retrieval strategies.

An overly-rigorous application of this design criterion, however, may only contribute further to the negative consequences of information technology with respect to the citizen decision maker. Such an information system would allow users to pursue any and all retrieval strategies, including the most inefficient strategies imaginable. The latter may well characterize the strategies used by many (if not most) citizens, and are thus less likely to help people cope with masses of information.

Educators in social studies should collaborate with software designers to develop information system interfaces that help enhance the efficiency of user searches, not that simply imitate current search strategies. Intelligent systems should be designed that come to "understand" the context and purposes that the user has brought to the system, that help users clarify their purposes, and that recommend further effective strategies. New information utilities should coach users as they structure their search and retrieval efforts. Such utilities might take the form of overlays for existing commercial databases and serve as options for users to select if they wish. Intelligent information system interfaces will serve to reduce the "cost" of citizen information processing by structuring the citizen's investigative work and reducing the amount of time and effort wasted on fruitless strategies that yield useless results.

Information-processing skills and contextual knowledge. Education for participation in meaningful representative government must include both knowledge and skills. With respect to the

latter, students must receive explicit training in information-processing skills (Perkins, 1985). For curriculum developers, this means, for example, that instructional materials involving the use of databases must contain at least two components: (1) lessons that help convey the informational content of the database and (2) lessons that explicitly teach and reinforce the skills involved in using information systems to solve problems, from defining the problem to structuring search strategies to evaluating the usefulness of information retrieved.

With respect to the knowledge aspect of citizen education, it is clear that for effective and efficient information retrieval and processing, citizens must possess fundamental contextual knowledge. Contextual knowledge must include an understanding of cultural and political traditions in which American democracy is grounded and through which it has flourished. In this point at least, one must applaud the recent report of the National Endowment for the Humanities [NEH] (1987) concerning humanities education in American public schools. The report argues that knowledge of one's cultural traditions informs citizen judgment and functions as "a kind of civic glue" (p. 7). If true, such knowledge represents at least a partial remedy for the splintering of reality fostered by new information technologies. Jefferson would find the notion of civic glue very appealing. Beyond this, he would doubtless laud the following NEH observation: "We wish for our children that their decisions be informed not by the wisdom of the moment, but by the wisdom of the ages;

and that is what we give them when we give them knowledge of culture" (p. 28).

Information selectivity. Striking a balance between skill development and knowledge transmission in education will help to reduce the cost of citizen information acquisition and processing by increasing processing proficiency and broadening the context for processing. Information use also requires selectivity, and this suggests that the social studies field should heed the recommendations advanced by Fred Newmann (1986) and others and abandon the notion of "coverage" and its related belief that all information is equally worthy of acquisition (or memorization). Social studies educators (and the general public as well) must remember that information is not the same as knowledge, that knowledge is created when information is applied to a purpose, and that doing so requires time and depth.

Enhance the Disposition Toward and Skills of Participation

The content of the contextual knowledge mentioned above should certainly include understanding the political process, especially the available avenues for effective citizen participation both at the local and national levels. As Newmann (1980) observed, the means at one's disposal to influence political policy making changes as one moves from the parochial environment of local affairs (communal participation) to the broader issues of national concern (societal participation). A citizen is more likely to feel politically efficacious and to be genuinely effective if s/he applies methods that are appropriate to a given

level of government. Moreover, Newmann argued that both levels of participation are essential to the continuing vitality of modern representative government.

A social studies curriculum most likely to enhance participatory abilities and dispositions is one that combines knowledge, skills, and first-hand experience. A number of social studies educators (e.g., Conrad & Hedin, 1977 and Newmann, 1977) have advocated active participatory experiences for students, recognizing as Rousseau and Jefferson did that participation serves an educative function in a democracy, in addition to its function as a mechanism by which individuals seek to protect their self-interests.

Conclusion:

Keeping Information Technology in Perspective

Finally, one must argue for perspective in how information technology is addressed in education today, recognizing that some traditional "basics" are still fundamental to the preparation of citizens for representative government. This is true even as public attention has focused on technology in recent years. The following claim by the Office of Technology Assessment (1982) underscored this level of interest:

> The so-called information revolution, driven by rapid advances in communication and computer technology, is profoundly affecting American education. It is changing the nature of what needs to be learned, who needs to learn it, who will provide it, and how it will be provided and paid for. (p. 3)

Education institutions responded with computer literacy courses, CAI, CMI, Advanced Placement Computer Science, and other initiatives of all flavors and colors (White & Hubbard, in press).

Sounding a cautionary note, Harriet T. Bernstein of the Council for Basic Education warned that "our vision of the future must rest on something more substantial than revolutionary technological advances" (1983, p. 108). She continued:

> Our troubles today are compounds of historical, economic, social, psychological, technical, and moral forces. They can only be addressed by Renaissance men and women, adept in all of those realms, capable of synthesizing knowledge (as distinct from information), able to inspire and motivate others, and willing to persevere....If we are to stand any chance of solving our social and economic problems, we need to create a large pool of citizens with a basic liberal arts education, in touch with the best thinking from other places, times, and cultures....[A truly visionary] system of public education will prove itself by producing citizens with a deep understanding of political democracy, a tolerance for ambiguity, an abiding curiosity, and a firm grip on the values that sustain both family and civilization. (p. 109)

What Bernstein, and the NEH report, are arguing for is a renewed focus on the "big picture," the fundamental purposes of education in a free society. Their observations reflect a commitment to and faith in the vitality of representative government -- and in the belief that citizens <u>can</u> be informed and participate responsibly. In this, they share Jefferson's faith in self-government. They also share his faith in society's ability to train its citizens to assume the burdens necessary to reap the blessings of freedom. Modern information technology challenges this faith, but need not destroy it. If, through

careful and thoughtful design of both technology and instruction, we can reduce the cost of becoming informed citizens and can enhance the effectiveness of citizen participation, there is every reason to affirm with renewed conviction that the safest depository of society's ultimate powers is still "We the People."

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